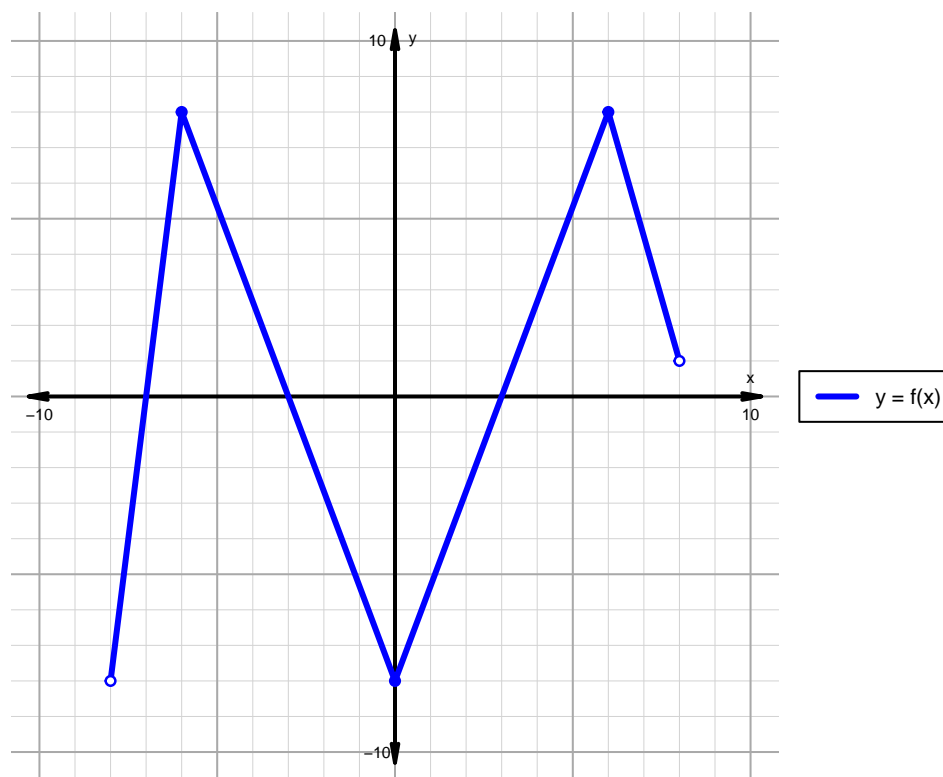


Name: _____

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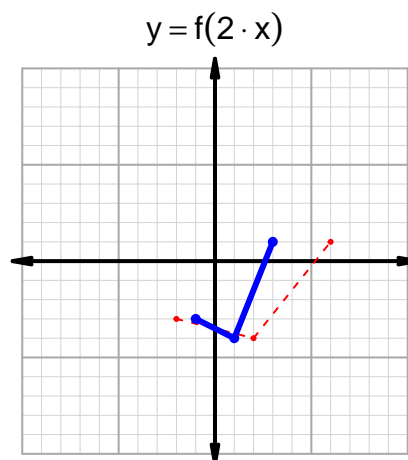
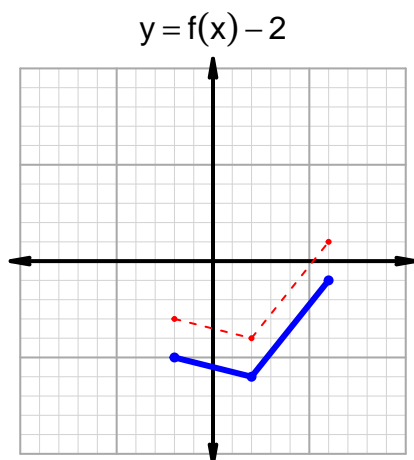
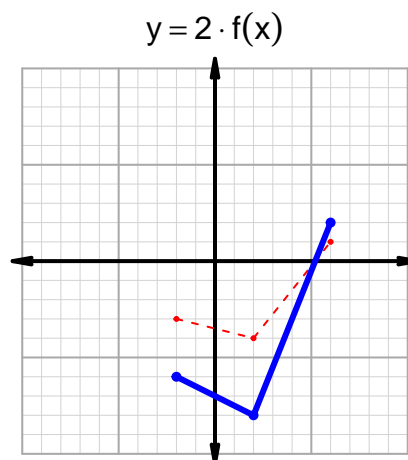
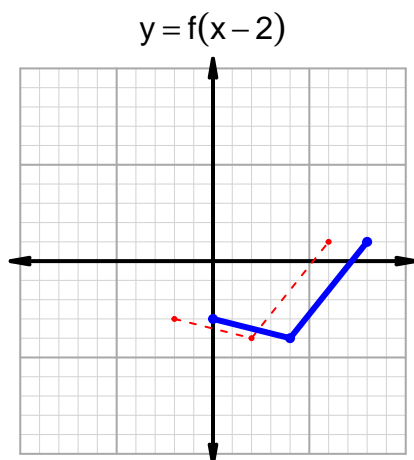
Intervals, Transformations, and Slope Solution (version 1)1. The function f is graphed below.

Indicate the following intervals using interval notation. Remember, you can use \cup between two intervals to indicate the union. Except for range, all intervals will indicate x values; this is standard.

Feature	Where
Positive	$(-7, -3) \cup (3, 8)$
Negative	$(-8, -7) \cup (-3, 3)$
Increasing	$(-8, -6) \cup (0, 6)$
Decreasing	$(-6, 0) \cup (6, 8)$
Domain	$(-8, 8)$
Range	$(-8, 8)$

Intervals, Transformations, and Slope Solution (version 1)

2. In the four graphs below, $y = f(x)$ is graphed as a dotted line. Please add the indicated transformed graphs indicated by the equations below using a solid line.



3. Let function g be defined by the table below. Use the formula $\frac{g(x_2) - g(x_1)}{x_2 - x_1}$ to find the average rate of change between $x_1 = 32$ and $x_2 = 95$. Express your answer as a reduced fraction.

x	$g(x)$
32	74
47	32
74	95
95	47

$$\frac{f(95) - f(32)}{95 - 32} = \frac{47 - 74}{95 - 32} = \frac{-27}{63}$$

The greatest common factor of -27 and 63 is 9. Divide numerator and denominator by the greatest common factor.

$$\text{AROC} = \frac{-3}{7}$$